ETSI TS 123 179 V13.5.0 (2017-03)

TECHNICAL SPECIFICATION

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/4b231088-5cef-498e-93f1-6da8ed975b22/etsi-ts-123-179-v13.5.0-2017-03

LTE;
Functional architecture and information flows to support mission critical communication services;
Stage 2
(3GPP TS 23.179 version 13.5.0 Release 13)

A GLOBAL INITIATIVE

Reference
RTS/TSGS-0623179vd50

Keywords
LTE

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/4b231088-5eef-49ee-93f1-6e8dd975b52/etsi-ts-123-179-v13.5.0-2017-03

Important notice

The present document can be downloaded from:
http://www.etsi.org/standards-search

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at
https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx

If you find errors in the present document, please send your comment to one of the following services:
https://portal.etsi.org/People/CommiteeSupportStaff.aspx

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.
The content of the PDF version shall not be modified without the written authorization of ETSI.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2017.
All rights reserved.

DECT™, **PLUGTESTS**™, **UMTS**™ and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.
3GPP™ and **LTE**™ are Trade Marks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.
GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (https://ipr.etsi.org/).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under http://webapp.etsi.org/key/queryform.asp.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/4b231088-5cef-498e-93f1-6da8dd975b52/etsi-ts-123-179-v13.5.0-2017-03

Contents

Intellectual Property Rights 2
Foreword 2
Modal verbs terminology 2
Foreword 12
1 Scope 13
2 References 13
3 Definitions, symbols and abbreviations 14
3.1 Definitions 14
3.2 Symbols 15
3.3 Abbreviations 15
4 Introduction 16
5 Assumptions and architectural requirements 17
5.1 Assumptions 17
5.1.1 Service continuity 17
5.1.2 Trust domain 17
5.2 Architectural requirements 17
5.2.1 General architectural requirements 17
5.2.2 Roaming requirements 17
5.2.3 Media routing requirements 18
5.2.4 Requirements for user identity management 18
5.2.5 Group affiliation and de-affiliation 18
5.2.6 MCPTT call requirements 18
5.2.6.1 General 18
5.2.6.2 Group call requirements 18
5.2.7 GCS AS requirements for the MCPTT service 19
5.2.8 UE-to-network relay MCPTT service requirements 19
5.2.9 Bearer management 19
5.2.9.1 General 19
5.2.9.2 EPS bearer considerations 20
5.2.9.2.1 Considerations for the EPS bearer to the MCPTT service PDN 20
5.2.9.2.2 Considerations for the EPS bearer to the MC common core services PDN and MC identity management service PDN 20
5.2.9.3 EPS unicast bearer considerations for MCPTT 20
5.2.9.4 MBMS bearer management 21
5.2.10 MCPTT system interconnect requirements 21
5.2.11 MCPTT user profile requirements 21
6 Involved business relationships 22
7 Functional model 24
7.1 General 24
7.2 Description of the planes 24
7.3 Functional model description 24
7.3.1 On-network functional model 24
7.3.2 Off-network functional model 27
7.4 Functional entities description 28
7.4.1 General 28
7.4.2 Application plane 28
7.4.2.1 General 28
7.4.2.2 Common services core 28
7.4.2.2.1 Configuration management client 28
7.4.2.2.2 Configuration management server 28
7.4.2.2.3 Group management client 29
7.4.2.2.4 Group management server 29

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/4b231088-5ecf-498e-93f1-6da8dd975b52/etsi-ts-123-179-v13.5.0-2017-03

7.4.2.2.5 Identity management client 29
7.4.2.2.6 Identity management server....29
7.4.2.2.7 Key management client 29
7.4.2.2.8 Key management server 29
7.4.2.3 MCPTT application service 29
7.4.2.3.1 MCPTT client....29
7.4.2.3.2 MCPTT server....30
7.4.2.3.3 Floor participant 31
7.4.2.3.4 Floor control server 31
7.4.2.3.5 Media distribution function 31
7.4.2.3.6 Media mixer 31
7.4.2.3.7 MCPTT user database 31
7.4.3 Signalling control plane 31
7.4.3.1 SIP entities 31
7.4.3.1.1 Signalling user agent 31
7.4.3.1.2 SIP AS 32
7.4.3.1.3 SIP core 32
7.4.3.1.3.1 General....32
7.4.3.1.3.2 Local inbound / outbound proxy....32
7.4.3.1.3.3 Registrar finder 32
7.4.3.1.3.4 Registrar / application service selection....33
7.4.3.2 SIP database 33
7.4.3.2.1 General 33
7.4.3.2.2 SIP database logical functions....34
7.4.3.3 HTTP entities 34
7.4.3.3.1 HTTP client 34
7.4.3.3.2 HTTP proxy....35
7.4.3.3.3 HTTP server 35
7.5 Reference points....35
7.5.1 General reference point principle....35
7.5.2 Application plane....35
7.5.2.1 General....35
7.5.2.2 Reference point MCPTT-1 (between the MCPTT client and the MCPTT server)....35
7.5.2.3 Reference point MCPTT-2 (between the MCPTT server and the MCPTT user database) 36
7.5.2.4 Reference point MCPTT-3 (between the MCPTT server and the MCPTT server)....36
7.5.2.5 Reference point MCPTT-4 (unicast between the floor control server and the floor participant) 36
7.5.2.6 Reference point MCPTT-5 (between the media distribution function and the EPS) 36
7.5.2.7 Reference point MCPTT-6 (between the MCPTT server and the EPS)....36
7.5.2.8 Reference point MCPTT-7 (unicast between the media distribution function and the media mixer)....36
7.5.2.9 Reference point MCPTT-8 (multicast between the media distribution function and the media mixer)....37
7.5.2.10 Reference point MCPTT-9 (multicast between the floor control server and the floor participant)....37
7.5.2.11 Reference point CSC-1 (between the identity management client and the identity management server) 37
7.5.2.12 Reference point CSC-2 (between the group management client and the group management server for configuration while UE is on-network) 37
7.5.2.13 Reference point CSC-3 (between the MCPTT server and the group management server) 37
7.5.2.14 Reference point CSC-4 (between the configuration management client and the configuration management server for configuration while UE is on-network) 37
7.5.2.15 Reference point CSC-5 (between the MCPTT server and the configuration management server)....38
7.5.2.16 Void....38
7.5.2.17 Reference point CSC-7 (between the group management servers) 38
7.5.2.18 Reference point CSC-8 (between the key management server and the key management client)....38
7.5.2.19 Reference point CSC-9 (between the key management server and the MCPTT server)....38
7.5.2.20 Reference point CSC-10 (between the key management server and the group management server) 38
7.5.2.21 Reference point CSC-11 (between the configuration management client and the configuration management server for configuration while UE is off-network)....39
7.5.2.22 Reference point CSC-12 (between the group management client and the group management server for configuration while UE is off-network)....39

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/4b231088-5ee0-49be-93f0-66a8d975b52/etsi-ts-123-179-v13.5.0-2017-03

7.5.2.23 Reference point CSC-13 (between the configuration management server and the MCPTT user database) 39
7.5.2.24 Reference point IWF-1 (between the MCPTT server and the interworking function to legacy systems) 39
7.5.3 Signalling control plane 39
7.5.3.1 General 39
7.5.3.2 Reference point SIP-1(between the signalling user agent and the SIP core) 39
7.5.3.3 Reference point SIP-2 (between the SIP core and the SIP AS) 40
7.5.3.4 Reference point SIP-3 (between the SIP core and SIP core) 40
7.5.3.5 Reference point HTTP-1 (between the HTTP client and the HTTP proxy) 40
7.5.3.6 Reference point HTTP-2 (between the HTTP proxy and the HTTP server) 40
7.5.3.7 Reference point HTTP-3 (between the HTTP proxy and HTTP proxy) 40
7.5.3.8 Reference point AAA-1 (between the SIP database and the SIP core) 40

8 Identities 41
8.1 Application plane 41
8.1.1 Mission Critical user identity (MC ID) 41
8.1.2 MCPTT user identity (MCPTT ID) 41
8.1.3 MCPTT group identity (MCPTT group ID) 41
8.1.3.1 General 41
8.1.3.2 MCPTT group ID management (off-network operation) 42
8.2 SIP signalling control plane 42
8.3 Relationship between identities in different planes 43
8.3.1 Relationship between MCPTT ID and public user identity 43
8.3.2 Relationship between MCPTT group ID and public service identity 43

9 Application of functional model to deployments 44
9.1 General 44
9.2 Architecture model and deployment scenarios for on-network operations 44
9.2.1 On-network architectural model 44
9.2.1.1 On-network architectural model diagram 44
9.2.1.2 Application services layer 45
9.2.1.2.1 Overview 45
9.2.1.2.2 Common services core 45
9.2.1.2.3 MCPTT application service 45
9.2.1.3 SIP core 45
9.2.1.4 EPS 45
9.2.1.5 UE 1 45
9.2.1.6 UE 2 45
9.2.2 Deployment scenarios 46
9.2.2.1 Administration of MCPTT application service, SIP core and EPS 46
9.2.2.1.1 General 46
9.2.2.1.2 Common administration of all planes 46
9.2.2.1.3 MCPTT service provider separate from SIP core and EPS 47
9.2.2.1.4 MCPTT service provider administers SIP core, separate from EPS 47
9.2.2.1.5 SIP core partially administered by both PLMN operator and MCPTT service provider 48
9.2.2.1.6 PLMN operator administers SIP core with SIP identities administered by MCPTT service provider 49
9.2.2.2 MCPTT user database, SIP database and HSS 49
9.2.2.3 Control of bearers by SIP core and MCPTT server 52
9.2.2.3.1 General 52
9.2.2.3.2 Control of bearers by SIP core 52
9.2.2.3.3 Control of bearers by MCPTT server 53
9.3 Architecture model for off-network operations 53
9.3.1 Off-network architectural model diagram 53
9.3.2 UE 3 54
9.3.3 UE 4 54
9.3.4 Off-line common services server 54
9.4 Architecture model for roaming 55

10 Procedures and information flows 55
10.1 MCPTT configuration 55
10.1.1 General 55

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/4b231088-5cef-498e-93f1-6da4dd975b52/etsi-ts-123-179-v13.5.0-2017-03

10.1.2 Information flows for MCPTT configuration 56
10.1.2.1 Store group configuration request 56
10.1.2.2 Store group configuration response 56
10.1.2.3 Get group configuration request 56
10.1.2.4 Get group configuration response 56
10.1.2.5 Subscribe group configuration request 57
10.1.2.6 Subscribe group configuration response 57
10.1.2.7 Notify group configuration request 57
10.1.2.8 Notify group configuration response 57
10.1.3 MCPTT UE configuration data 57
10.1.3.1 General 57
10.1.3.2 Procedures 57
10.1.3.3 Structure of UE configuration data 58
10.1.4 MCPTT user profile 58
10.1.4.1 General 58
10.1.4.1a Information flows for MCPTT user profile 59
10.1.4.1a.1 Get MCPTT user profile request 59
10.1.4.1a.2 Get MCPTT user profile response 59
10.1.4.1a.3 Notification for MCPTT user profile data update 59
10.1.4.1a.4 Get updated MCPTT user profile data request 59
10.1.4.1a.5 Get updated MCPTT user profile data response 60
10.1.4.1a.6 Update MCPTT user profile data request 60
10.1.4.1a.7 Update MCPTT user profile data response 60
10.1.4.2 MCPTT user obtains the MCPTT user profile(s) from the network 60
10.1.4.3 MCPTT user receives updated MCPTT user profile data from the network 61
10.1.4.4 MCPTT user updates the MCPTT user profile data to the network 62
10.1.5 MCPTT group configuration management 62
10.1.5.1 Store group configurations at the group management server 62
10.1.5.2 Retrieve group configurations at the group management client 63
10.1.5.3 Subscription and notification for group configuration data 64
10.1.5.4 Structure of group configuration data 65
10.1.5.5 Dynamic data associated with a group 65
10.2 User authentication and authorization for MCPTT service 65
10.3 Affiliation to MCPTT group(s) 66
10.3.1 General 66
10.3.2 Information flows for affiliation 66
10.3.2.1 MCPTT group affiliation request 66
10.3.2.1a MCPTT group affiliation request (MCPTT server – MCPTT server) 67
10.3.2.2 MCPTT group affiliation response 67
10.3.2.2a MCPTT group affiliation response (MCPTT server – MCPTT server) 67
10.3.2.3 Group affiliation status update 67
10.3.2.4 MCPTT group de-affiliation request 68
10.3.2.4a MCPTT group de-affiliation request (MCPTT server – MCPTT server) 68
10.3.2.5 MCPTT group de-affiliation response 68
10.3.2.5a MCPTT group de-affiliation response (MCPTT server – MCPTT server) 68
10.3.2.6 Group de-affiliation status update 69
10.3.2.7 MCPTT group affiliation change request 69
10.3.2.8 MCPTT group affiliation change response 69
10.3.3 Affiliation 69
10.3.3.1 MCPTT group affiliation procedure 69
10.3.3.2 Affiliation to MCPTT group(s) defined in partner MCPTT system 71
10.3.3.2.1 Functional description 71
10.3.3.2.2 Procedure 71
10.3.4 De-affiliation from MCPTT group(s) 72
10.3.4.1 General 72
10.3.4.2 MCPTT group de-affiliation procedure 72
10.3.4.3 De-affiliation from MCPTT group(s) defined in partner MCPTT system 73
10.3.5 Remote change of affiliation 75
10.3.5.1 Remote change of affiliation for groups defined in primary MCPTT system 75
10.3.5.1.1 Authorized user remotely changes another MCPTT user's affiliated MCPTT group(s) – mandatory mode 75

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/40231088-1ed9-43e-93f1-6da8c9b75b52/etsi-ts-123-179-v13.5.0-2017-03

10.3.5.1.2 Authorized user remotely changes another MCPTT user's affiliated MCPTT group(s) – negotiated mode 76
10.3.5.2 Remote change of affiliation for groups defined in partner MCPTT system 78
10.3.5.2.1 Authorized user remotely changes another MCPTT user's affiliated MCPTT group(s) defined in partner MCPTT system – mandatory mode 78
10.4 Group management (on-network) 79
10.4.1 General 79
10.4.2 Information flows for group management 80
10.4.2.1 Group creation request 80
10.4.2.2 Group creation confirmation response 80
10.4.2.3 Group regroup request 80
10.4.2.4 Group regroup confirmation response 80
10.4.2.5 Group regroup teardown request 81
10.4.2.6 Group regroup teardown response 81
10.4.2.7 Group creation notify 81
10.4.2.8 Group regroup notify 81
10.4.2.9 Group regroup teardown notify 81
10.4.2.9a Group regroup teardown notification 82
10.4.2.9b Group regroup teardown notification response 82
10.4.2.10 Group regroup request 82
10.4.2.11 Group regroup response 82
10.4.2.12 Group regroup notification 82
10.4.2.13 Group regroup notification response 83
10.4.3 Group creation 83
10.4.4 Group regrouping 84
10.4.4.1 Temporary group formation - group regrouping within an MCPTT system 84
10.4.4.2 Temporary group formation involving multiple MCPTT systems 85
10.4.4.3 Temporary group tear down involving multiple group host servers 87
10.5 Pre-established session (on-network) 89
10.5.1 General 89
10.5.2 Information flows for pre-established session 89
10.5.2.1 Pre-established session establishment 89
10.5.2.2 Pre-established session modification 90
10.5.2.3 Pre-established session release - client initiated 90
10.5.2.4 Pre-established session release - server initiated 91
10.5.2.5 Pre-established session call connect request 91
10.5.2.6 Pre-established session call disconnect request 91
10.5.3 Procedures 92
10.5.3.1 General 92
10.5.3.2 Pre-established session establishment 92
10.5.3.3 Pre-established session modification 94
10.5.3.4 Pre-established session release 95
10.5.3.5 Call connect and disconnect procedures using pre-established session 96
10.5.3.5.1 Call connect and disconnect over unicast 96
10.6 Group call 97
10.6.1 General 97
10.6.2 On-network group call 97
10.6.2.1 General 97
10.6.2.2 Information flows for group call in on-network 97
10.6.2.2.1 MCPTT emergency group call request 97
10.6.2.2.1a MCPTT emergency group call response 97
10.6.2.2.2 MCPTT emergency group call cancel request 97
10.6.2.2.2a MCPTT emergency group call cancel response 98
10.6.2.2.3 MCPTT emergency alert request 98
10.6.2.2.3a MCPTT emergency alert response 99
10.6.2.2.4 MCPTT emergency state cancel request 99
10.6.2.2.4a MCPTT emergency state cancel response 99
10.6.2.2.5 MCPTT imminent peril group call request 99
10.6.2.2.5a MCPTT imminent peril group call response 100
10.6.2.2.6 MCPTT imminent peril group call cancel request 100
10.6.2.2.6a MCPTT imminent peril group call cancel response 100
10.6.2.2.7 Group call request (MCPTT client – MCPTT server) 100

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/4b231088-5cef-498e-93fb-6ea8dd975b52/etsi-ts-123-179-v13.5.0-2017-03

10.6.2.2.8 Group call request (MCPTT server – MCPTT server) 101
10.6.2.2.9 Group call request (MCPTT server – MCPTT client) 101
10.6.2.2.10 Group call response (MCPTT server – MCPTT client) 101
10.6.2.2.11 Group call response (MCPTT server – MCPTT server) 101
10.6.2.2.12 Group call response (MCPTT client – MCPTT server) 102
10.6.2.2.13 Group call notify (MCPTT server – MCPTT client) 102
10.6.2.2.14 Group call release request (MCPTT server – MCPTT client) 102
10.6.2.2.15 Group call release request (MCPTT server – MCPTT server) 102
10.6.2.2.16 Group call release response (MCPTT client – MCPTT server) 103
10.6.2.2.17 Group call release response (MCPTT server – MCPTT server) 103
10.6.2.2.18 Group call rejoin request (MCPTT client – MCPTT server) 103
10.6.2.2.19 Group call rejoin response (MCPTT server – MCPTT client) 103
10.6.2.2.20 Group join request (MCPTT client – MCPTT server) 104
10.6.2.2.21 Group join response (MCPTT server – MCPTT client) 104
10.6.2.2.22 Group call leave request (MCPTT server – MCPTT client) 104
10.6.2.2.23 Group call leave response (MCPTT client – MCPTT server) 105
10.6.2.2.24 Group interrogate request (MCPTT server – MCPTT server) 105
10.6.2.2.25 Group interrogate response (MCPTT server – MCPTT server) 105
10.6.2.3 Group call within one MCPTT system 105
10.6.2.3.1 Group call models 105
10.6.2.3.1.1 Pre-arranged group call 105
10.6.2.3.1.2 Chat group call 110
10.6.2.3.2 Exiting group call due to de-affiliation 115
10.6.2.4 Group call involving groups from multiple MCPTT systems 116
10.6.2.4.1 Group call for temporary groups across multiple MCPTT systems 116
10.6.2.4.1.1 Group call setup 116
10.6.2.4.1.2 Group call release 118
10.6.2.4.2 Group call for temporary group formed by group regroup procedure involving multiple MCPTT systems via trusted mode 120
10.6.2.4.3 Group call for an MCPTT group defined in the partner MCPTT system 121
10.6.2.4.3.1 Group call setup procedure – initiating side 121
10.6.2.4.3.2 Group call setup – terminating side 122
10.6.2.4.4 Merging of groups involving multiple MCPTT systems 123
10.6.2.5 Broadcast group call 124
10.6.2.5.1 General 124
10.6.2.5.2 Common broadcast group call procedure 124
10.6.2.5.3 Temporary group – broadcast group call procedure 125
10.6.2.6 Emergency and imminent peril procedures 126
10.6.2.6.1 MCPTT emergency group call 126
10.6.2.6.1.1 MCPTT emergency group call commencement 126
10.6.2.6.1.2 MCPTT group call upgraded to an MCPTT emergency group call 128
10.6.2.6.1.3 MCPTT emergency group call cancel 130
10.6.2.6.2 MCPTT imminent peril group call 132
10.6.2.6.2.1 MCPTT imminent peril group call commencement 132
10.6.2.6.2.2 Imminent peril group call upgrade 134
10.6.2.6.2.3 MCPTT imminent peril group call cancel 136
10.6.2.6.3 MCPTT emergency alert 137
10.6.2.6.3.1 MCPTT emergency alert initiation 137
10.6.2.6.3.2 MCPTT emergency state cancel 139
10.6.3 Off-network group call 140
10.6.3.1 General 140
10.6.3.2 Information flows for group call in off-network 140
10.6.3.2.1 Group call announcement 140
10.6.3.2.2 MCPTT upgrade to emergency call 141
10.6.3.2.3 MCPTT emergency group cancel 141
10.6.3.2.4 Response 141
10.6.3.2.5 MCPTT emergency alert request 142
10.6.3.2.6 MCPTT emergency alert cancel 142
10.6.3.2.7 MCPTT upgrade to imminent peril call 142
10.6.3.2.8 MCPTT imminent peril group call cancel 142
10.6.3.3 Group call setup 143
10.6.3.4 Passive join to group call 144

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/40b231088-6ea6-49e3-3f1-6da5ddb75b32/etsi-ts-123-179-v13.5.0-2017-03

10.6.3.5 Join to ongoing group call when new entry member initiates the call with on-going group call id 145
10.6.3.6 Immediate group call announcement to join an ongoing group call 146
10.6.3.7 Group call release due to inactivity 147
10.6.3.8 Broadcast group call 147
10.6.3.9 Emergency and imminent peril procedures 148
10.6.3.9.1 Emergency group call 148
10.6.3.9.2 MCPTT imminent peril 149
10.6.3.9.3 MCPTT emergency alert 149
10.6.3.9.3.1 MCPTT emergency alert initiation 149
10.6.3.9.3.2 MCPTT emergency state cancel 151
10.7 Private call 152
10.7.1 General 152
10.7.2 Private call in on-network 152
10.7.2.1 Information flows for private call in on-network 152
10.7.2.1.1 MCPTT private call request (MCPTT client – MCPTT server) 152
10.7.2.1.2 MCPTT private call request (MCPTT server – MCPTT server) 152
10.7.2.1.2a MCPTT private call request (MCPTT server – MCPTT client) 153
10.7.2.1.3 MCPTT private call response (MCPTT client – MCPTT server) 153
10.7.2.1.4 MCPTT private call response 153
10.7.2.1.4a MCPTT call end request 154
10.7.2.1.5 MCPTT emergency private call request (MCPTT client to MCPTT server) 154
10.7.2.1.5a MCPTT emergency private call request (MCPTT server to MCPTT client) 154
10.7.2.1.6 MCPTT progress indication 155
10.7.2.1.7 MCPTT ringing 155
10.7.2.2 Private call within one MCPTT system 155
10.7.2.2.1 Private call setup in automatic commencement mode 155
10.7.2.2.2 Private call setup in manual commencement mode 157
10.7.2.2.2.1 Description 157
10.7.2.2.2.2 Procedure 157
10.7.2.2.3 Private call release 159
10.7.2.2.3.1 Client initiated 159
10.7.2.2.3.2 Server initiated 160
10.7.2.3 Private call within several MCPTT systems 161
10.7.2.3.1 Private call setup in automatic commencement mode – MCPTT users in multiple MCPTT systems 161
10.7.2.3.2 Private call setup in manual commencement mode – MCPTT users in multiple MCPTT systems 163
10.7.2.3.3 Private call release – MCPTT users in multiple MCPTT systems 165
10.7.2.4 MCPTT emergency private call 165
10.7.2.4.1 MCPTT emergency private call commencement 165
10.7.2.4.2 MCPTT private call emergency upgrade 167
10.7.3 Private call in off-network 168
10.7.3.1 Information flows for private call in off-network 168
10.7.3.1.1 Call setup request 168
10.7.3.1.2 Call setup response 168
10.7.3.1.3 Call release request 168
10.7.3.1.4 Call release response 168
10.7.3.2 Use of ProSe capability for private call 169
10.7.3.3 Private call setup in automatic commencement mode 169
10.7.3.4 Private call setup in manual commencement mode 170
10.7.3.5 Private call release 171
10.7.3.6 MCPTT emergency private call 172
10.8 Simultaneous session for MCPTT call 172
10.8.1 General 172
10.9 Floor control 172
10.9.1 Floor control for on-network MCPTT service 172
10.9.1.1 General 172
10.9.1.2 Information flows for floor control for on-network 173
10.9.1.2.1 General 173
10.9.1.2.2 Floor request 173
10.9.1.2.3 Floor granted 173
10.9.1.2.4 Floor rejected 173

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/4b231088-3ced-498e-93f1-60bd6d9756c52/etsi-ts-123-179-v13.5.0-2017-03

10.9.1.2.5 Floor request cancel 174
10.9.1.2.6 Floor request cancel response 174
10.9.1.2.7 Floor request cancel notify 174
10.9.1.2.8 Floor idle 175
10.9.1.2.9 Floor release 175
10.9.1.2.10 Floor taken 175
10.9.1.2.11 Floor revoked 175
10.9.1.2.12 Floor acknowledgement 176
10.9.1.2.13 Queue position request 176
10.9.1.2.14 Queue position info 176
10.9.1.3 Floor control within one MCPTT system 176
10.9.1.3.1 Floor request, floor granted and floor taken during an MCPTT session 176
10.9.1.3.2 Floor override 178
10.9.1.3.2.1 Floor override using floor revoked (also floor rejected) during an MCPTT session 178
10.9.1.3.2.2 Floor override without using floor revoked during an MCPTT session 179
10.9.1.3.3 Queue position during an MCPTT session 180
10.9.1.3.4 Floor request cancellation from the floor request queue 181
10.9.1.3.4.1 Floor request cancellation from the queue – MCPTT user initiated 181
10.9.1.3.4.2 Floor request cancellation from the queue - floor control server initiated 182
10.9.1.4 Floor control involving groups from multiple MCPTT systems 183
10.9.1.4.1 Partner MCPTT system routes all floor control messages to primary MCPTT system's floor control server 183
10.9.1.4.2 Partner MCPTT system performs filtering of floor control messages entering and leaving the partner MCPTT system 185
10.9.2 Floor control for off-network MCPTT service 188
10.9.2.1 General 188
10.9.2.2 Information flows for floor control for off-network 189
10.9.2.2.1 General 189
10.9.2.2.2 Floor granted 189
10.9.2.3 Floor control during silence 189
10.9.2.3.1 Successful floor taken (No floor contention) 189
10.9.2.4 Simultaneous floor requests 190
10.9.2.5 Floor request during speaking with queue 190
10.9.2.6 Floor request during speaking without queue 191
10.9.2.7 Override 192
10.9.2.8 Floor queue status 193
10.10 Use of MBMS transmission (on-network) 194
10.10.1 Information flows for MBMS Transmission 194
10.10.1.1 MBMS bearer announcement 194
10.10.1.2 MapGroupToBearer 195
10.10.1.3 UnmapGroupFromBearer 195
10.10.1.4 MBMS listening status report 195
10.10.2 Use of pre-established MBMS bearers 195
10.10.2.1 General 195
10.10.2.2 Procedure 196
10.10.3 Use of dynamic MBMS bearer establishment 197
10.10.4 Call connect and disconnect over MBMS 198
10.10.4.1 General 198
10.10.4.2 Procedure 198
10.10.4.2.1 Call connect over MBMS 198
10.10.4.2.2 Call disconnect over MBMS 199
10.10.5 Switching from MBMS bearer to unicast bearer 200
10.11 MCPTT resource management (on-network) 201
10.11.1 General 201
10.11.2 Request for unicast resources at session establishment 201
10.11.3 Request for modification of unicast resources 202
10.11.4 Management of multicast media bearers 203
10.11.5 Request for resources with shared priority 204
10.11.5.1 General 204
10.11.5.2 Procedure 204
10.12 MCPTT media plane transmissions with partner MCPTT systems (on-network) 205
10.13 Use of UE-to-network relay 207

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/4b2315f8-ace4-4938-931f-6aa6d9758552/etsi-ts-123-179-v13.5.0-2017-03

10.13.1 UE-to-network relay service authorization 207
10.13.2 UE-to-network relay MCPTT service 207
10.14 Location information (on-network) 207
10.14.1 General 207
10.14.2 Information flows for location information 207
10.14.2.1 Location reporting configuration 207
10.14.2.2 Location information report 208
10.14.2.3 Location information request 208
10.14.2.4 Event-triggered location reporting procedure 208
10.14.2.5 On-demand location reporting procedure 209

Annex A (informative): Service continuity for MCPTT 211

A.1 Service continuity between on-network MCPTT service and UE-to-network relay MCPTT service 211

Annex B (normative): MCPTT related data 214

B.1 General 214

B.2 UE configuration data 214

B.3 MCPTT user profile data 215

B.4 Group configuration data 220

B.5 Service configuration data 223

B.6 Initial UE configuration data 225

Annex C (informative): Local UE settings for MCPTT 226

C.1 Local UE settings for MCPTT 226

Annex D (informative): Change history 227

History 232

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/4b231088-5cef-498e-93f1-6da8dd975b52/etsi-ts-123-179-v13.5.0-2017-03

Foreword

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

3 or greater indicates TSG approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/4b231988-5cef-498e-93f1-6da8dd975b52/etsi-ts-123-179-v13.5.0-2017-03